

Work Order ID 77327

December-02-11 1:59:18 PM

77327

Page 1

Item ID: D2966-1-BENT

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Skidtube Assembly 105

Stop ***NS2***

Start Date: 02/12/2011 Start Qty: 1.00

1

Cust Item ID:

Required Date: 07/12/2011 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: M.L.S

Date: 11/12/02 Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2966	Rev A								

120

0.00

120

BENDING MACHINE - SKIDTUBES

CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

Bend tube as per program BO105 on CNC Bender and Dwg D2966. Bend folio #1 use bending aid DT9631

DP

11-12-7

150

QC5- Inspect part completeness to step on W/O

0.00

150

QC

Memo

0.00

Quality Control

1 0 8 11-12-12

300

Identify as per dwg & Stock Location: 46

0.00

300

Packaging

Memo

0.00

Packaging

Packaging

DP

12-2-22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 77327***77327***

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Item ID: D2966-1-BENT

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Skidtube Assembly 105

Stop ***NS2***

Start Date: 02/12/2011 Start Qty: 1.00

1

Cust Item ID:

Required Date: 07/12/2011 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
310	QC21- Final Inspection - Work Order Release	0.00							
310									
QC	Memo	0.00							
Quality Control									

12/2/22
HLS 12/02/22

12-02-22
(1)

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

Picklist Print

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Page 1

Work Order ID: 77327

77327

Parent Item: D2966-1-BENT

D2966-1-BENT

Parent Item Name: Skidtube Assembly 105

Start Date: 02/12/2011

Required Date: 07/12/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP rev A 10.09.17 New issue EC verified by:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2962-125		Manufactured	No				Each	23.0000		1			
D2962-125									**				
Outer Tube Extrusion													

Location

HALL

17532

Loc Qty

23

23

Loc Code

1

11-12-7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN RF	DRAWN BY RF	DART AEROSPACE USA, INC. BELLEVUE, WA	
CHECKED #	APPROVED #	DRAWING NO. D2966	REV. A SHEET 1 OF 2
DATE 00.03.08		TITLE BO 105 SKIDTUBE ASSEMBLY	SCALE NTS
A	00.03.08	NEW ISSUE	

RELEASED
00.05.11 #

Qty	Part Number	Description
X	D2966-041	SKIDTUBE ASSEMBLY
1	D2962-125	EXTRUSION
1	D2964	CAP
1	D2965	CAP
1	D2970-1	WEARPLATE
1	D2970-3	WEARPLATE
1	D2971	CROSS BOLT SPACER
7	D2973	CROSS BOLT SPACER
1	D2976	WEB
36	ALS7-1032-130 or ALS4-1032-130 or AKS7-1032-130 or AKS4-1032-130	INSERT
28	AN960JD10L	WASHER
26	MS27039-1-08	SCREW
2	MS27039-1-09	SCREW
1	D3176-1	BUSHING
1	D3176-3	NUT

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 77329
M.C.J.
11/12/02



GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) WELDING TO BE DONE PER DART QSI 004.
- 3) INSERT D2976 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015 AFTER BENDING.
- 4) USE DART DRILL TEMPLATE DT8451 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION B-B (34 PLACES) AFTER FINISH. SEAL WEARPLATE SCREWS WITH SIKAFLEX-241/-291.
- 5) DO NOT INSTALL MS27039-1-08 SCREWS AND AN960JD10L WASHERS IN THESE LOCATIONS.
- 6) INSTALL ALS7-1032-130 INSERT, MS27039-1-08 SCREW, AND AN960JD10L WASHER IN 2 PLACES THIS LOCATION BEFORE POWDER COATING.
- 7) FINISH:
ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2976 WEB
POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.6.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTER LINE PER DART QSI 005 4.4 (OPTIONAL) BLACK SANDTEX (REF 4.3.5.7)



01.01.29
01.01.30

A2	02.10.30	ADD D3176-1/-3	#
A1	01.01.29	CHANGE COLOR TO BLACK SANDTEX	#

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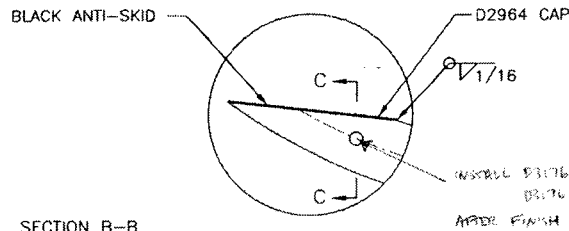
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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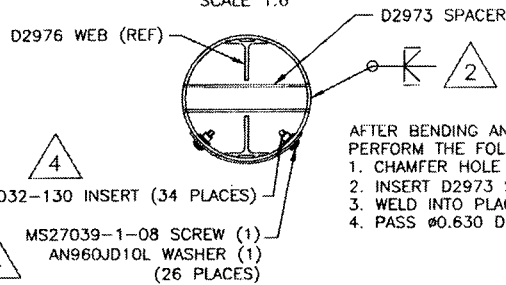
NOTE: Date & initial all entries

77327

DETAIL A
SCALE 1:3

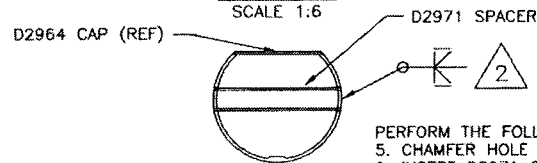


SECTION B-B
SCALE 1:6



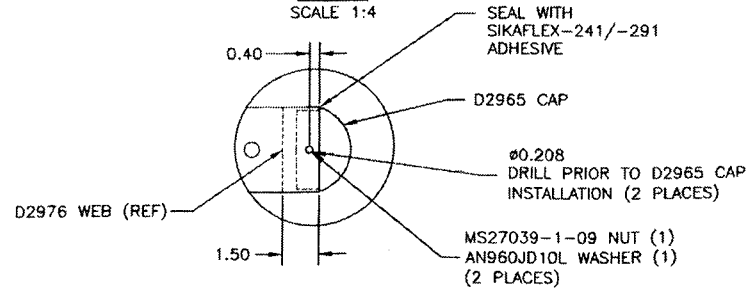
- AFTER BENDING AND DRILLING ASSEMBLY
PERFORM THE FOLLOWING FOR 0.750 HOLES ONLY:
1. CHAMFER HOLE 0.030 x 45°
 2. INSERT D2973 SPACER (7 PLACES)
 3. WELD INTO PLACE AND GRIND FLUSH
 4. PASS 0.630 DRILL TO REMOVE SPILL OVER

SECTION C-C
SCALE 1:6

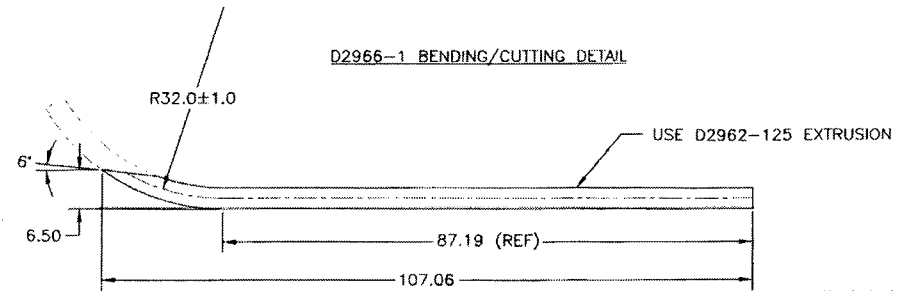


- PERFORM THE FOLLOWING FOR 0.625 HOLES ONLY:
5. CHAMFER HOLE 0.030 x 45°
 6. INSERT D2971 SPACER
 7. WELD INTO PLACE AND GRIND FLUSH
 8. PASS 0.484 DRILL TO REMOVE SPILL OVER

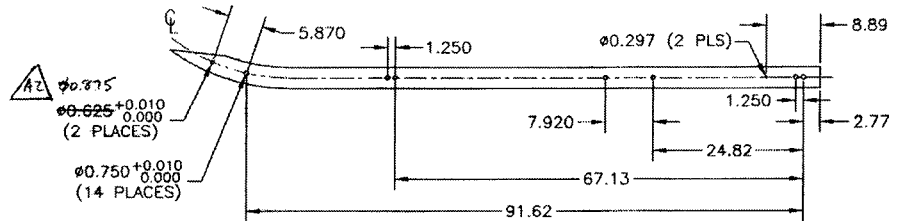
DETAIL D
SCALE 1:4



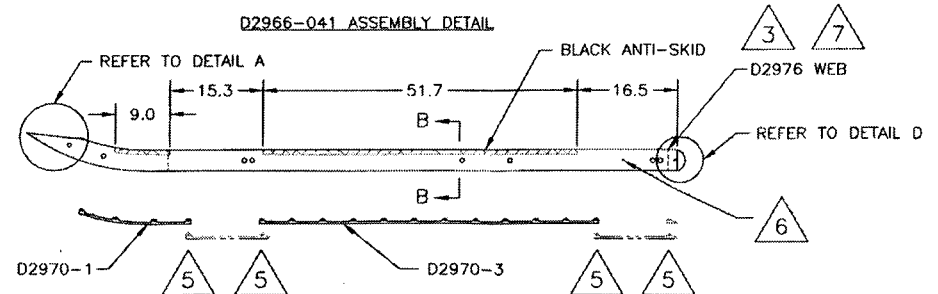
D2966-1 BENDING/CUTTING DETAIL



D2966-1 DRILLING DETAIL



D2966-041 ASSEMBLY DETAIL



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DESIGN RF	DRAWN BY RF	DART DART AEROSPACE USA, INC. BELLINGHAM, WA	REV. A
CHECKED A	APPROVED A	DRAWING NO. D2966	SHEET 2 OF 2
DATE 00.03.08	TITLE BO 105 SKIDTUBE ASSEMBLY	SCALE 1:20	

W/O:		WORK ORDER CHANGES					
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